UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,315	01/16/2004	Gregory T. Bleck	GALA-08484	9065

7590 05/02/2006

J. Mitchell Jones
MEDLEN & CARROLL, LLP
Suite 350
101 Howard Street
San Francisco, CA 94105

EXAMINER	
RIGGINS, PATRICK S	

ART UNIT	PAPER NUMBER
1633	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/759,315	BLECK ET AL.	
	Examiner	Art Unit	
	Patrick S. Riggins	1633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-18,20-28 and 30-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-18,20-28,30-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Receipt is acknowledged of an amendment filed 2/21/06. Claims 1 and 41 were amended. Claims 29 and 42 have been canceled. Presently claims 1-10, 12-18, 20-28, and 30-41 are pending and under examination.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The rejection of claims 21, 29, and 42 under 35 U.S.C. 112, second paragraph is withdrawn due to the amendment to the claims.

4. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This is a new rejection necessitated by amendment.

5. Claim 13 recites the limitation "said host cells comprising multiple integrated retroviral vectors" in line 2. There is insufficient antecedent basis for this limitation in the claim. Further, this limitation is generally confusing as steps a) and b) now simply address the multiplicity of infection and host cells comprising multiple integrants are not directly addressed until step d). This claim is further indefinite as step d) is added while claim 1 from which claim 13 depends already has a step d). It is thus unclear where this step is to be inserted in the method of claim 1. This lack of clarity is further exacerbated by the presence of step e) in claim 1 where the protein is purified. Are the cells to be retransduced before or after this protein purification step?

6. Claims 1-10, 12-18, and 20-28, and 30-41 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the method of claim 1, wherein step c) comprises repeating steps a) and b) a plurality of times to provide host cells comprising up to 50 integrated retroviral vectors, does not reasonably provide enablement for the method of claim 1 wherein steps a) and b) are repeated a plurality of times to provide host cells comprising greater than 50 to about 100 integrated retroviral vectors. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims for the reasons set forth in the Office Action mailed 11/17/05.

Response to Arguments

7. Applicant's arguments filed 2/21/06 have been fully considered but they are not persuasive. Applicant states that the specification indeed provides examples for how to transduce host cells. It is noted that the case has not been made that the specification fails to teach how to transduce cells, rather the rejection is based on the lack of any support for the ability to transduce cells such that the cells comprise greater than 50 retroviral integrations. Applicant states that the specification teaches that at least 5 and at least 100 integrants has been taught. To the contrary, and as stated in the rejection, the examples in the specification teach a maximum of only 13 integrants while the prior art teaches a maximum of 15 integrants. (See Arai (Virology 260:109-115 (1999)), of record, page 112, first paragraph and Mathor (Proc Natl Acad Sci USA 93: 10371-10376 (1996)), of record, Table 1). Applicant has in no way questioned the assertion that

the examples teach only 13 integrants. Rather all statements in the specification cited in the arguments presented by Applicant are purely prophetic in nature with no scientific basis presented to suggest that the high levels stated for example on page 3, lines 25-26 are achieved. The only solid scientific basis in the specification can be found in the Examples where a maximum of 13 integrants was seen. While it ha indeed been stated that the specification enables up to about 50 integrants, the true level of support only allows for a maximum of 15 integrations. Indeed this level was achieved only in the prior art, not by applicants in the examples.

8. Claims 1-10, 12-18, 20-28, and 30-40 are rejected and claim 41 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a **NEW MATTER** rejection. Regarding the rejection of claims 1-10, 12-18, 20-28, and 30-40, this is new rejection necessitated by amendment.

9. Applicant has amended claim 1 to recite that "from 20 to 100 integrated retroviral vectors" are present in the genome of the host cell. Applicant has failed to point to where in the specification support for this limitation can be found. Upon careful perusal of the originally filed specification, claims, drawings, and abstract, no support for this limitation could be found.

10. Page 4, lines 7-8 state that at least 2, 5 and 10 vectors will integrate. Page 5, line 4 states that at least 5 and at least 10 integrated copies would be present. Page 44, lines 25 and 26 states that "host cells contain from 2 to 100 copies of the integrated vectors, and preferably from 5 to

50 copies of the integrated vector". Then Examples 19, 22, 25, and 26 provide exemplification of numbers of integrants achieved. These are not expressed as number of integrants per cell, and as such no mention of 20 integrants is given. Further, as argued above, the maximal number of integrants apparent is about 13. Therefore, as the specification does not provide support for these new limitations, the limitations constitute impermissible new matter.

Response to Arguments

11. Applicant's arguments filed 2/21/06 regarding the rejection of claim 41, and applicable to the new rejection of claims 1-10, 12-18, 20-28, and 30-40 have been fully considered but they are not persuasive. Applicants point to the specification at page 3: 25-26 where it is stated that at least 5 and at least 100 are contemplated. Applicants argue that this means that 20-100 is thus disclosed. This is improper. There is no evidence of record to suggest that at the time of filing Applicants had contemplated cells comprising the range of 20-100 integrants. Simply because 20 falls within the ranges disclosed provides no evidence that the end points of the range at 20 was ever contemplated at the time of the invention. Thus claiming this range indeed constitutes impermissible new matter.

12. The rejections of the claims under 35 U.S.C. 102 and 35 U.S.C. 103 have been withdrawn as none of the references teach of cells with greater than 20 integrants. It is noted that Applicant has in no way addressed the argument presented in paragraph 46 in the Office Action mailed 11/17/05. It is thus still unclear why Applicant feels that the instant application is novel and unobvious over the prior art, since the prior art actually teaches a greater number of

integrants, i.e. 15, than the specification, i.e. 13. Thus, if the prior art is not enabled for up to 50 integrants as argued by Applicant, it is unclear how the specification would be enabled to this higher level of integrants.

13. It is further noted that on page 12 of the amendment, Applicant states that the assertion in the Office Action mailed 11/17/05 tat Falqui (J Mol Med 77: 250-253 (1999), of record) shows that serial transduction leads to increased numbers of integrations in Figures 1 and 2 is not true. Applicant states that Falqui establishes that more cells are transduced, not that more integrants are achieved. Applicant has failed to appreciate the full scope of the data presented in Figure 2 of Falqui. Indeed Falqui does show that serial transduction leads to an increased number of cells as being transduced. Figure 2 of Falqui also clearly shows that with serial transduction a considerably higher level of green fluorescence is observed. As the same virus was used in single transduction versus three cycles of transduction, the same promoter led to the expression of GFP. Thus how could one explain the clear increase in the level of GFP expression unless more retrovirus was present in the individual cells? IT is thus clear that the three-fold serial transduction protocol of Falqui leads not only to an increase in the number of positive cells, but also an increase in the expression levels in each cell. The most straightforward explanation for this is that multiple retroviruses had integrated in individual cell sand thus more GFP was expressed from individual cells.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is

appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claim 41 stands rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,852,510 (Bremel).

16. An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). Although the conflicting claims are not identical, they are not patentably distinct from each other because, in the case of instant claim 41, it is generic to all that is recited in the respective claim of the patent, i.e., the patented claims fall entirely within the scope of instant claim 41. Instant claim 41 is drawn to any host cell comprising 20-100 integrated retroviral vectors. Patent claim 1 further limits the host cell such that it is clonally selected and there are 20-50 integrants. Further limitation is placed on the nature of the retroviral integrants. It is therefore clear that instant claim 41 is generic to patent claim 1.

17. Claim 41 stands provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/397,079.

18. An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). Although the conflicting claims are not identical, they are not patentably distinct from each other because, both the instant claim and the reference claim are claiming host cells with multiple integrated vectors. The only difference in the limitation of the host cell is in the number of integrants. It is noted however that the ranges of possible integrant overlap, and as MPEP 2144.05 states: "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists." Thus, the instant claim is not patentably distinct from the reference claim.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

19. Claim 41 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 103 of copending Application No. 11/018,895.

20. An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). Although the conflicting claims are not identical, they are not patentably distinct from each other because, both the instant claim and the reference claim

are claiming host cells with multiple integrated vectors. The instant claim is generic to all that is recited in the reference claim, except for the range of integrated vectors. It is noted however that the ranges of possible integrants overlap, and as MPEP 2144.05 states: "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists." Thus, the instant claim is not patentably distinct from the reference claim.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

21. Applicant states that a terminal disclaimer will be filed upon the resolution of the remaining rejections. Until that the time, the rejections are maintained.

Conclusion

22. No claim is allowed.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick S. Riggins whose telephone number is (571) 272-6102. The examiner can normally be reached on M-F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave T. Nguyen can be reached on (571) 272-0731. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick Riggins, Ph.D.
Examiner
Art Unit 1633

ANNE M. WEHBE' PH.D
PRIMARY EXAMINER